



# SEQUENCE LISTING

<110> DAI, KEN SHUO

<120> HUMAN ARL-RELATED GENE VARIANTS ASSOCIATED WITH CANCER

<130> U014798-3

<140> 10/653,681

<141> 2003-09-02

<160> 4

<170> PatentIn version 3.2

<210> 1

<211> 1090

<212> DNA

<213> ARTIFICIAL SEQUENCE

<220>

<223> VARIANT OF HUMAN ALDOSE REDUCTASE-LIKE GENE

<220>

<221> CDS

<222> (70)..(333)

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Met Ala Thr Phe Val Glu Leu Ser Thr Lys Ala Lys Met Pro  
1 5 10

att gtg ggc ctg ggc act tgg aag tct cct ctc ggc aaa gtg aaa gaa 159  
Ile Val Gly Leu Gly Thr Trp Lys Ser Pro Leu Gly Lys Val Lys Glu  
15 20 25 30

gca gtg aag gtg gcc att gat gca gga tat cgg cac att gac tgt gcc 207  
Ala Val Lys Val Ala Ile Asp Ala Gly Tyr Arg His Ile Asp Cys Ala  
35 40 45

tat gtc tat cag aat gaa cat gaa gtg ggg gaa gcc atc caa gag aag 255  
Tyr Val Tyr Gln Asn Glu His Glu Val Gly Glu Ala Ile Gln Glu Lys  
50 55 60

atc caa gag aag gct gtg aag cgg gag gac ctg ttc atc gtc agc aag 303  
Ile Gln Glu Lys Ala Val Lys Arg Glu Asp Leu Phe Ile Val Ser Lys  
65 70 75

ttg tgg ccc act tcc aga tcg aga agc tct tgaacaaaacc tggactgaaa 353  
Leu Trp Pro Thr Ser Arg Ser Arg Ser Ser  
80 85

tataaaccag tgactaacca ggttgagtgt cacccatacc tcacgcagga gaaactgac 413

cagtactgcc actccaaggg catcaccgtt acggcctaca gccccctggg ctctccggat 473

agaccttggg ccaagccaga agacccttcc ctgctggagg atcccaagat taaggagatt 533

gctgcaaagc acaaaaaaac cgcagcccag gttctgatcc gtttccatat ccagaggaat 593  
 gtgattgtca tccccaagtc tgtgacacca gcacgcattg ttgagaacat tcagggtcttt 653  
 gactttaaat tgagtgatga ggagatggca accatactca gcttcaacag aaactggagg 713  
 gcctgtaacg tgttgcaatc ctctcatttg gaagactatc ccttcgatgc agaattattga 773  
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 ctccactcat gtcccathtt agccaagctt atttaagatc acagtgaact tagtcctgtt 893  
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 <223> PEPTIDE ENCODED BY VARIANT OF HUMAN ALDOSE REDUCTASE-LIKE GENE

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Gly Leu Gly Thr Trp Lys Ser Pro Leu Gly Lys Val Lys Glu Ala Val  
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Lys Val Ala Ile Asp Ala Gly Tyr Arg His Ile Asp Cys Ala Tyr Val  
 35 40 45

Tyr Gln Asn Glu His Glu Val Gly Glu Ala Ile Gln Glu Lys Ile Gln  
 50 55 60

Glu Lys Ala Val Lys Arg Glu Asp Leu Phe Ile Val Ser Lys Leu Trp  
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Pro Thr Ser Arg Ser Arg Ser Ser  
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<223> VARIANT OF HUMAN ALDOSE REDUCTASE-LIKE GENE

<220>

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<222> (70)..(804)

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Met Ala Thr Phe Val Glu Leu Ser Thr Lys Ala Lys Met Pro  
1 5 10

att gtg ggc ctg ggc act tgg aag tct cct ctc ggc aaa gtg aaa gaa 159  
Ile Val Gly Leu Gly Thr Trp Lys Ser Pro Leu Gly Lys Val Lys Glu  
15 20 25 30

gca gtg aag gtg gcc att gat gca gga tat cgg cac att gac tgt gcc 207  
Ala Val Lys Val Ala Ile Asp Ala Gly Tyr Arg His Ile Asp Cys Ala  
35 40 45

tat gtc tat cag aat gaa cat gaa gtg ggg gaa gcc atc caa gag aag 255  
Tyr Val Tyr Gln Asn Glu His Glu Val Gly Glu Ala Ile Gln Glu Lys  
50 55 60

atc caa gag aag gct gtg aag cgg gag gac ctg ttc atc gtc agc aag 303  
Ile Gln Glu Lys Ala Val Lys Arg Glu Asp Leu Phe Ile Val Ser Lys  
65 70 75

ttg tgg ccc act ttc ttt gag aga ccc ctt gtg agg aaa gcc ttt gag 351  
Leu Trp Pro Thr Phe Phe Glu Arg Pro Leu Val Arg Lys Ala Phe Glu  
80 85 90

aag acc ctc aag gac ctg aag ctg agc tat ctg gac gtc tat ctt att 399  
Lys Thr Leu Lys Asp Leu Lys Leu Ser Tyr Leu Asp Val Tyr Leu Ile  
95 100 105 110

cac tgg cca cag gga ttc aag tct ggg gat gac ctt ttc ccc aaa gat 447  
His Trp Pro Gln Gly Phe Lys Ser Gly Asp Asp Leu Phe Pro Lys Asp  
115 120 125

gat aaa ggt aat gcc atc ggt gga aaa gca acg ttc ttg gat gcc tgg 495  
Asp Lys Gly Asn Ala Ile Gly Gly Lys Ala Thr Phe Leu Asp Ala Trp  
130 135 140

gag gcc atg gag gag ctg gtg gat gag ggg ctg gtg aaa gcc ctt ggg 543  
Glu Ala Met Glu Glu Leu Val Asp Glu Gly Leu Val Lys Ala Leu Gly  
145 150 155

gtc tcc aat ttc agc cac ttc cag atc gag aag ctc ttg aac aaa cct 591  
Val Ser Asn Phe Ser His Phe Gln Ile Glu Lys Leu Leu Asn Lys Pro  
160 165 170

gga ctg aaa tat aaa cca gtg act aac cag gtt gag tgt cac cca tac 639  
Gly Leu Lys Tyr Lys Pro Val Thr Asn Gln Val Glu Cys His Pro Tyr  
175 180 185 190

ctc	acg	cag	gag	aaa	ctg	atc	cag	tac	tgc	cac	tcc	aag	ggc	atc	acc	687
Leu	Thr	Gln	Glu	Lys	Leu	Ile	Gln	Tyr	Cys	His	Ser	Lys	Gly	Ile	Thr	
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Val	Thr	Ala	Tyr	Ser	Pro	Leu	Gly	Ser	Pro	Asp	Arg	Pro	Trp	Ala	Lys	
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cca	gaa	gac	cct	tcc	ctg	ctg	gag	gat	ccc	aag	att	aag	gag	att	gct	783
Pro	Glu	Asp	Pro	Ser	Leu	Leu	Glu	Asp	Pro	Lys	Ile	Lys	Glu	Ile	Ala	
		225					230					235				
gca	aag	cac	tcc	cca	agt	ctg	tgacaccagc	acgcattggt	gagaacattc							834
Ala	Lys	His	Ser	Pro	Ser	Leu										
		240				245										
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actggagggc ctgtaacgtg ttgcaatcct ctcatTTTgga agactatccc ttcgatgcag																954
aatattgagg ttgaatctcc tgggtgagatt atacaggaga ttctctttct tcgctgaagt																1014
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gtcctgttat agacgagaat cgaggtgctg ttttagacat ttatttctgt atgttcaact																1134
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 <212> PRT  
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<220>  
 <223> PEPTIDE ENCODED BY VARIANT OF HUMAN ALDOSE REDUCTASE-LIKE GENE

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Lys	Val	Ala	Ile	Asp	Ala	Gly	Tyr	Arg	His	Ile	Asp	Cys	Ala	Tyr	Val
		35					40					45			

Tyr	Gln	Asn	Glu	His	Glu	Val	Gly	Glu	Ala	Ile	Gln	Glu	Lys	Ile	Gln
	50					55					60				

Glu	Lys	Ala	Val	Lys	Arg	Glu	Asp	Leu	Phe	Ile	Val	Ser	Lys	Leu	Trp
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65					70						75					80
Pro	Thr	Phe	Phe	Glu	Arg	Pro	Leu	Val	Arg	Lys	Ala	Phe	Glu	Lys	Thr	
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Leu	Lys	Asp	Leu	Lys	Leu	Ser	Tyr	Leu	Asp	Val	Tyr	Leu	Ile	His	Trp	
			100					105					110			
Pro	Gln	Gly	Phe	Lys	Ser	Gly	Asp	Asp	Leu	Phe	Pro	Lys	Asp	Asp	Lys	
		115					120					125				
Gly	Asn	Ala	Ile	Gly	Gly	Lys	Ala	Thr	Phe	Leu	Asp	Ala	Trp	Glu	Ala	
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Met	Glu	Glu	Leu	Val	Asp	Glu	Gly	Leu	Val	Lys	Ala	Leu	Gly	Val	Ser	
145					150					155					160	
Asn	Phe	Ser	His	Phe	Gln	Ile	Glu	Lys	Leu	Leu	Asn	Lys	Pro	Gly	Leu	
				165					170					175		
Lys	Tyr	Lys	Pro	Val	Thr	Asn	Gln	Val	Glu	Cys	His	Pro	Tyr	Leu	Thr	
			180					185					190			
Gln	Glu	Lys	Leu	Ile	Gln	Tyr	Cys	His	Ser	Lys	Gly	Ile	Thr	Val	Thr	
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Ala	Tyr	Ser	Pro	Leu	Gly	Ser	Pro	Asp	Arg	Pro	Trp	Ala	Lys	Pro	Glu	
	210					215					220					
Asp	Pro	Ser	Leu	Leu	Glu	Asp	Pro	Lys	Ile	Lys	Glu	Ile	Ala	Ala	Lys	
225					230					235					240	
His	Ser	Pro	Ser	Leu												
				245												